

Claims

1. A method for handling data between a Clock and Data Recovery circuit and a data processing unit of a telecommunications network node of an asynchronous network, using a bit rate adaptation system comprising a memory unit with a memory stack and a write process circuit and a read process circuit, and Pointer Synchronization Controller;

the CDR passing recovered data and recovered clock signals to the bit rate adaptation system and the bit rate adaptation system handling the data to the processing unit at a rate indicated by a local node clock;

the write process circuit, controlled by the recovered clock, incrementing a write pointer and writing the recovered data into the memory address indicated by said write pointer, and the read process circuit controlled by the local clock incrementing a read pointer and reading the recovered data from the memory address indicated by said read pointer, both pointers running free until the end of a data frame; and

the pointer synchronization controller monitoring the recovered data signal to detect guard bands between data frames and bit synchronization fields and, depending on this information, acting on the pointers of the memory unit

wherein

upon detecting the guard band between data frames,

the write pointer is set to a predetermined fixed initial address; and

upon detecting the bit synchronization field of the input data frame, the read pointer is set to said write pointer fixed initial address.

2. A bit rate adaptation circuit for handling data between a Clock and Data Recovery circuit and a processing unit of a telecommunications network node of an asynchronous network, comprising
 - a memory unit with a memory stack, a read process circuit R_p and a write process circuit W_p , built in such a manner so that the write process circuit, controlled by a recovered clock input coming from the Clock and Data Recovery circuit, increments a write pointer and writes data into the memory address indicated by said write pointer, and the read process circuit, controlled by a local node clock, increments a read pointer and reads data from the memory address indicated by said read pointer; and
 - a pointer synchronization controller built in such a manner so that it is able to monitor the recovered data signal and detect guard bands between data frames and bit synchronization fields and depending on this information is able to act on the pointers of the memory unit MEM,
 wherein
 - the pointer synchronization controller is further built such that it sets the write pointer to a predetermined fixed initial address value when a guard band is detected, and sets the read pointer to said fixed initial address value of the write pointer when a bit synchronization field is detected.
3. A Clock and Data Recovery system of a telecommunications network node of an asynchronous network comprising a Clock and Data Recovery circuit and a bit rate adaptation circuit according to claim 2.

4. A telecommunications network node of an asynchronous network comprising a bit rate adaptation circuit according to claim 2 or a Clock and Data Recovery system according to claim 3.